



Docket No.: 58086-232072  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
George GRUNER

Art Unit: 1754

Application No: 10/582,407

Examiner: Not Yet Assigned

Confirmation No: 1100

Filed: June 9, 2006

Atty. Docket No: 58086-232072

For: ACTIVE ELECTRONIC DEVICES WITH  
NANOWIRE COMPOSITE  
COMPONENTS

Customer No:

**\*26694\***

PATENT AND TRADEMARK OFFICE

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (IDS)**

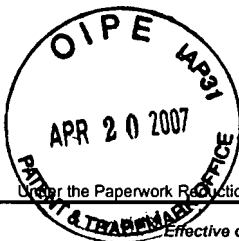
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear on any patent to issue therefrom. A copy of each of documents are enclosed.

This Supplemental Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

In accordance with 37 CFR 1.97(g), the filing of this Supplemental Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the



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JW/1754

PTO/SB/17 (07-06)  
Approved for use through 01/31/2007. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  
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<b>FEE TRANSMITTAL</b> <b>For FY 2005</b> <small>Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).</small>		<b>Complete if Known</b>	
		Application Number	10/582,407
		Filing Date	June 9, 2006
		First Named Inventor	George Gruner
		Examiner Name	Not Yet Assigned
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Art Unit	1754
<b>TOTAL AMOUNT OF PAYMENT</b>		(\$)	0.00
		Attorney Docket No.	58086-232072

**METHOD OF PAYMENT** (check all that apply)

<input type="checkbox"/> Check	<input type="checkbox"/> Credit Card	<input type="checkbox"/> Money Order	<input type="checkbox"/> None	<input type="checkbox"/> Other (please identify): _____
<input checked="" type="checkbox"/> Deposit Account	Deposit Account Number: <u>22-0261</u>		Deposit Account Name: <u>Venable LLP</u>	
For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)				
<input checked="" type="checkbox"/> Charge fee(s) indicated below	<input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee			
<input checked="" type="checkbox"/> Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17	<input checked="" type="checkbox"/> Credit any overpayments			

**FEE CALCULATION**

**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

**2. EXCESS CLAIM FEES**

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

<u>Total Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	<u>Multiple Dependent Claims</u>
_____ - 20 = _____	x _____	= _____		<u>Fee (\$)</u> <u>Fee Paid (\$)</u>
HP = highest number of total claims paid for, if greater than 20.				
<u>Indep. Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	
_____ - 3 = _____	x _____	= _____		
HP = highest number of independent claims paid for, if greater than 3.				

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
0	- 100 = _____	/50 _____ (round up to a whole number) x _____	= _____	

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)	<u>Fees Paid (\$)</u>
Other (e.g., late filing surcharge): _____	

<b>SUBMITTED BY</b>			
Signature		Registration No. (Attorney/Agent)	42,459
Name (Print/Type)	Henry J. Daley	Telephone	(202) 344-4362
		Date	April 20, 2007

filing of this Supplemental Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Supplemental Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed documents.

It is believed that no fee is due for the submission of this Supplemental Information Disclosure Statement. However, the Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 22-0261, under Order No. 58086-232072. A fee transmittal is enclosed.

Respectfully submitted,

Dated: April 20, 2007

By Henry J. Daley  
Henry J. Daley  
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(202) 344-4000  
(202) 344-8300 (Fax)

Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/582,407	
			Filing Date	June 9, 2006	
			First Named Inventor	George GRUNER	
			Art Unit	1754	
			Examiner Name	To Be Assigned	
Sheet	1	of	2	Attorney Docket Number	58086-232072

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	1	AGO, H., et al., "Composites of Carbon Nanotubes and Conjugated Polymers for Photovoltaic Devices", <b>Advanced Materials</b> , 11, No. 15, p. 1281-1285 (1999)		
	2	ARMITAGE, N.P., "Quasi-Langmuir-Blodgett Thin Film Deposition of Carbon Nanotubes," <b>Journal of Applied Physics Letters</b> , Vol. 95, No. 6, March 15, 2004, p. 3228-3330.		
	3	BACHTOLD, Adrian, et al., "Logic Circuits with Carbon Nanotube Transistors", <b>Science</b> , Vol. 294, November 9, 2001, p. 1317-1320.		
	4	BRADLEY, K. et al., "Flexible Nanotube Electronics," <b>Nano Letters</b> , Vol. 3, No. 10, p. 1353-1355, (2003).		
	5	CHEN et al., "Noncovalent Engineering of Carbon Nanotube Surfaces by Rigid, Functional Conjugated Polymers", <b>J. Am. Chem. Soc.</b> , 124, p. 9034-9035 (2002).		
	6	CHEN, R.J., et al., "Noncovalent Functionalization of Carbon Nanotubes for Highly Specific Electronic Biosensors," <b>PNAS</b> , Vol. 100, No. 9, p. 4984-2989 (2003).		
	7	CUI, J.B., et al., "Carbon Nanotube Memory Devices of High Charge Storage Stability", <b>Applied Physics Letters</b> , Vol. 81, No. 17, October 21, 2002, p. 3260-3262.		
	8	DERYCKE, V., et al., "Carbon Nanotube Inter- and Intramolecular Logic Gates," <b>Nano Letters</b> , Vol. 1, No. 9, September 2001, p. 453-456.		
	9	DUAN, X., et al., "General Synthesis of Compound Semiconductor Nanowires", <b>Advanced Materials</b> , 12, No. 4, p. 298-302, (2000).		
	10	FUHRER, M.S. et al., "High-Mobility Nanotube Transistor Memory", <b>Nano Letters</b> , Vol. 2, No. 7, p. 755-759 (2002).		
	11	GABRIEL, J.C., "Large Scale Production of Carbon Nanotube Transistors: A Generic Platform for Chemical Sensors", <b>Mat. Res. Symp. Soc. Proc.</b> , Vol. 776, p. Q12.7.1 – Q12.7.7, (2003).		
	12	STAR A., et al., "Polymer Coatings of Carbon Nanotube Sensors," <b>Polymer Prep.</b> 44(2): 201 (2003).		
	13	HUYNH, W. U., et al., "Hybrid Nanorod-Polymer Solar Cells", <b>Science</b> , Vol. 295, March 29, 2002, p. 2425-2427.		
	14	JAVEY, Ali, et al., "Electrical Properties and Devices of Large-Diameter Single-Walled Carbon Nanotubes," <b>Applied Physics Letters</b> , Vol. 80, No. 6, February 11, 2002, p. 1064-1066.		
	15	MARTEL, R., et al., "Single- and Multi-wall Carbon Nanotube Field-effect Transistors," <b>Applied Physics Letters</b> , Vol. 73, No. 17, October 26, 1998, p. 2447-2449.		
	16	MCEUEN, Paul L., et al., "Disorder, Pseudospins, and Backscattering in Carbon Nanotubes," <b>Physics Review Letters</b> , Vol. 83, No. 24, December 13, 1999, p. 5098-5101.		
	17	GABRIEL A., et al., "Electronic Detection of Specific Protein Binding Using Nanotube FET Devices," <b>Nano Letters</b> , Vol. 3, No. 4, p. 459-463 (2003).		
	18	SNOW, E.S., et al. "Random Networks of Carbon Nanotubes as an Electronic Material," <b>Applied Physics Letters</b> , Vol. 82, No. 13, March 31, 2003, p. 2145-2147.		
	19	RAMAMURTHY, P.C., et al. "Polyaniline/Single Walled Carbon Nanotube Composite Electronic Devices," <b>SOLID-STATE ELECTRONICS</b> , Vol. 48, (11 <sup>th</sup> Foresight Conference, October 10-12, 2003) p. 2019-2024 (2004).		
	20	RADOSAVLJEVIC, M., et al., "Nonvolatile Molecular Memory Elements Based on		

Examiner Signature	Date Considered
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Substitute for form 1449A/B/PTO  <h1>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h1>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/582,407
				Filing Date	June 9, 2006
				First Named Inventor	George GRUNER
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				Attorney Docket Number	58086-232072
Sheet	2	of	2		

[illegible]

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature		Date Considered	
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